Greystone Representative Projects

Representative Environmental Projects

SDCWA AND IID CONSERVED WATER TRANSFER PROGRAM

San Diego County Water Authority

Greystone is assisting the San Diego County Water Authority (SDCWA) with environmental compliance issues relating to its water transfer agreement with the Imperial Irrigation District (IID). The proposed transfer agreement for 300,000 acre-feet annually will be the largest transfer of water from agricultural to urban use in California's history. IID is the CEQA Lead Agency, and the Bureau of Reclamation is the lead federal agency. SDCWA's primary interest in the process relates to all permitting actions and mitigation costs necessary to successfully complete the Transfer Agreement. Key elements of the process include defining analytical scope, scoping and public involvement, agency coordination and consultation, technical review and critique of impact analyses, identification and design of mitigation requirements, and production of legally defensible draft and final documents. Greystone is currently preparing the cost estimate of all mitigation measures required to implement the transfer agreement.

PROGRAM ENVIRONMENTAL IMPACT REPORT FOR WATER MASTER PLAN

San Diego County Water Authority

Greystone is assisting the San Diego County Water Authority (SDCWA) in the preparation of a Program Environmental Impact Report in accordance with CEQA to assess the environmental effects of implementing the SDCWA's Regional Water Facilities Master Plan (Master Plan). The purpose of the Master Plan is to evaluate the ability of the SDCWA to continue to meet its goals for current plans for water supply and facility improvements, and to recommend new facilities or improvements to existing facilities needed to meet the SDCWA goals through 2030. The Master Plan is intended to function as the roadmap for implementing the major capital improvements the SDCWA needs to serve projected water demands.

LAKE HODGES PROJECTS

San Diego County Water Authority

Greystone is assisting the SDCWA with various tasks associated with their Emergency Storage Project (ESP). The ESP includes a new dam and reservoir at Olivenhain, reoperation of Lake Hodges, and expansion of the San Vicente Reservoir. Other planned facilities include pipelines, pump stations, treatment capacity, and flow control facilities. A water transmission conduit will be built connecting Lake Hodges to the new Olivenhain Reservoir. An inlet/outlet facility and pump station will pump water from Lake Hodges to the new Olivenhain Reservoir, and control gravity flow of water from Olivenhain Reservoir back to Lake Hodges. The Lake Hodges Pump Station and Inlet/Outlet (LHPS&IO) and Lake Hodges to Olivenhain Pipeline (LHOP) projects are part of the ESP. Since completing the ESP planning effort, the Authority has considered adding pumped storage hydroelectric facilities within the conduit connecting Lake Hodges to the new Olivenhain Reservoir. The Olivenhain-Hodges Pumped Storage (OHPS) project is a proposed hydropower generation project that takes advantage of the LHPS&IO and LHOP projects. This will allow the Authority to take advantage of peaking power production with the gravity flow connection and 770-foot difference of reservoir elevation levels. Specifically as part of this project, Greystone will be responsible for:

- Preparation of environmental documentation and agency coordination to satisfy FERC requirements for the 40 MW conduit exemption;
- CEQA compliance for the pumped storage hydroelectric project;
- Planning and design phase assistance to ensure full compliance with all adopted mitigation measures and permit conditions of approval;
- Permitting assistance for any new permits or amendments to existing permits that may be required to reflect design changes and final construction plans and operations; and
- Inspection monitoring during construction to ensure and document compliance with all required environmental mitigation measures and conditions.

UKIAH VALLEY WATER RIGHTS

O'Laughlin & Paris/Ukiah Water District

Greystone performed a due diligence investigation on behalf of the Ukiah Water District in support of its intended purchase of water rights of 5.9 cubic feet per second (constant flow) on the Russian River. The analyses included 1) investigation of four wells to determine the condition, yield, water quality, and hydraulic connectivity with the Russian River; and 2) analysis of water conservation measures undertaken by the existing water rights holder to quantify conserved water volume to establish maximum water rights under the California Water Code (Section 1011).

WETLAND PERMITTING

Superior Self Storage -El Dorado Hills, California

Greystone prepared the U.S. Army Corps of Engineers (ACOE) Section 404 of the Clean Water Act Nationwide 39 permit for a "waters of the U.S." including wetlands for an intermittent drainage fill and restoration/improvement project. The preferred alternative for this project would have involved placing fill in 0.48 acres wetlands to create the Cambridge Self Storage site. However, a Section 404(b)(1) analysis was required by the ACOE and the project was redesigned to comply the regulatory requirements of the Section 404(b)(1) Guidelines. Greystone conducted an analysis of the reconfiguration of the site to avoid, minimize, and compensate for impacts to jurisdictional waters of the U.S. This analysis included a survey for wetlands and potentially occurring threatened and endangered species including the red-legged frog. Lastly, Greystone prepared the application for the California Department of Fish and Game Section 1600 Streambed Alteration Agreement, and the California Regional Water Quality Control Board Section 401 Water Quality Certification permit.

SPENCEVILLE MINE CLOSURE

California Department of Fish and Game

Greystone teamed with another consulting firm to implement the closure of the Spenceville Mine in Nevada County. The abandoned Spenceville Mine, located within the Spenceville Wildlife Refuge was the location of copper ore mining from the late 1880s to the early 1900s. After the workings collapsed, the mine was converted to open pit mining. When abandoned, an open pit and 60,000 cubic yards of mixed overburden and mine tailings were left behind. The Department of Fish and Game, working with the Division of Mines and Geology, closed the mine, thereby addressing the mine's degraded condition. Closure included treating

approximately 7 million gallons of acid mine drainage from the abandoned open pit mine. This was accomplished with the design and construction of an on-site treatment plant that operated 24 hours a day, seven days a week, for 35 days. The Department of Fish and Game used the treated water for irrigation of nearby land. Permitting for the treatment plant included working with the Central Valley Regional Water Quality Control Board to develop Waste Discharge Requirements (WDR) for the plant effluent. The WDRs were based on bench scale testing results of available treatment technologies. Waste rock and tailings on site were treated, and placed back in the pit. The area was covered and revegetated. A nearby stream that had been impacted by the abandoned mine was rejuvenated and restored. Permitting for the mine closure included working with the CVRWQCB to develop a surface and groundwater monitoring plan to be implemented after pit closure. As part of the reclamation project, artifacts-mining equipment or cultural-were identified, recorded and when possible refurbished. Greystone also prepared permit applications and the required CEQA documents for the closure. Greystone led the public participation aspects of the project, including presentations at public meetings and public education.

CALFED BAY-DELTA PROGRAM: Technical Analyses and Comment

Western Area Power Administration, Sierra Nevada Region

Greystone was retained as special consultant to a cooperating agency in the CALFED program, to provide expert review and analysis of planning studies and draft policy reports issued by the CALFED Bay-Delta Program. Tasks have included technical analyses of proposed California water resource management policies, attendance at CALFED technical committee meetings, review of draft policy documents, and analytical reporting relative to Western's contract interests and the general adequacy of the alternatives presented by CALFED within the context of CEQA and NEPA requirements.

Technical comments were prepared on 1) analyses of water supply alternatives (Phase II Alternative Descriptions; Alternatives Appendices; and comment letters submitted by the U.S. Bureau of Reclamation, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and California Department of Fish and Game); and 2) the three volume Ecosystem Restoration Program Plan (Volume I: Plan and Elements/Existing Conditions; Volume II: Indicators for Restoration Monitoring; and Volume III: Implementation Strategy).

SAND HOLLOW RESERVOIR ENVIRONMENTAL REPORT

Washington County Water Conservancy District/BLM

Greystone prepared the environmental report for the Washington County Water Conservancy District (WCWCD) analyzing water resources management and environmental issues of developing a new storage reservoir and conjunctive use operation. The report examined the District's water resources management goals and provided an assessment of the broad range of potential environmental effects that can be expected during dam construction and long-term operations of the reservoir and a recovery well field that would harvest groundwater seepage from the reservoir. The project report was designed to provide information to a wide variety of citizens and resource management agencies. A primary purpose of the report was to assess changed environmental conditions with operation of the off-channel reservoir, including diversion of flows from the Virgin River, a tributary to the Colorado River, and groundwater recharge and recovery from the underlying Navajo aquifer. Water quality, an issue of particular concern, was evaluated using detailed simulation modeling of the Virgin River and Navajo

Aquifer. Other issues evaluated included water supply demands, water conservation planning, aesthetic, recreation, and effects on land, water, T&E species, and cultural resources.

Greystone's team included environmental specialists with significant experience in water resources policy and management, water supply planning, aquatic ecology, modeling of surface water and groundwater systems, and technical reporting. Originally started as an Environmental Impact Statement (EIS) for the Bureau of Land Management (BLM), Greystone also conducted a public involvement program and prepared a formal scoping summary. The BLM had jurisdiction over approval of the project because it managed the preferred reservoir site. The Omnibus Parks and Public Lands Management Act of 1996 (HR 4236) was signed into law in November 1996, which among other elements, included approval of a land exchange that eliminated the BLM's authority over the reservoir project. The District subsequently directed Greystone to prepare the project environmental report to make policy and environmental information available to responsible agencies and the public. This project recently (6/98) was awarded the Presidential Award for excellence in NEPA practice by the National Association of Environmental Professionals.

CENTRAL VALLEY PROJECT WATER SUPPLY CONTRACT TECHNICAL REVIEW AND COMMENT ON DRAFT EIS/EIR

Western Area Power Administration

Greystone provided technical review and prepared comments on the draft EIS/EIR for a water supply contract with potential to reduce hydropower generation at Folsom Dam, with substantial implications for Western's Sierra Nevada Region power contractors (*Central Valley Project Water Supply Contract, Draft EIS/EIR*).

INITIAL STUDY/NEGATIVE DECLARATION FOR STATE WATER PROJECT WATER EXCHANGE PROGRAM

Mojave Water Agency/Solano County Water Agency

Greystone staff managed the preparation of an Initial Study/Negative Declaration which supported a water exchange agreement between the Mojave Water Agency (MWA) and the Solano County Water Agency (SCWA). The exchange was based on the fact that, in years of inadequate State Water Project (SWP) water supplies, a portion of the MWA SWP entitlement supply could be delivered to meet water demands in SCWA and water demands in MWA could be met from stored groundwater. In years of adequate SWP water supplies, a portion of the SCWA SWP entitlement could be delivered to MWA for groundwater recharge.

LIVE OAK NORTH DRAINAGE PROJECT

City of Galt

Greystone prepared a delineation and mitigation plan of wetlands within the Galt Industrial Park Expansion Area, and completed CEQA compliance documentation for industrial development and a City-sponsored drainage improvement project. The delineation was submitted to the U.S. Army Corps of Engineers for formal verification. Assessment of threatened and endangered species, and analyses of mitigation options were completed concurrent with the delineation review process. A Pre-Discharge Notification (PDN) application and off-site mitigation plan were prepared for submittal to the Army Corps of Engineers, with an application for Streambed

Alteration Agreement to be prepared for the Department of Fish and Game. A Water Quality Certification permit application was also prepared for submittal to the Regional Water Quality Control Board. The final report also presented mitigation alternatives and options, including on-site avoidance; partial fill, with on-site enhancement and/or off-site mitigation; off-site mitigation; and purchase of mitigation credits through an approved mitigation bank.

CEQA compliance for the drainage project was accomplished with an Expanded Initial Study for which a Mitigated Negative Declaration was ultimately adopted. Special tasks included consultation with the USFWS regarding endangered species issues, presentations at public hearings, and construction monitoring to ensure protection of giant garter snakes.

INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

City of Galt

Greystone prepared an Initial Study and Mitigated Negative Declaration for an Industrial Park Water Storage Reservoir and Booster Pump Station for the City of Galt. The Project was designed to meet the City of Galt's fire suppression needs, and to supply drinking water, and consisted of constructing aboveground storage reservoirs, a control building and pump station, and other associated site improvements. Environmental issues analyzed included aesthetics, cultural resources, noise, and air quality. These resources were mitigated to less than significant levels. A mitigation-monitoring plan was also completed for this Project.

VINEYARD LAKE ESTATES

Nevada County

Greystone prepared an EIR for a residential subdivision built surrounding three ponds at the Vineyard Lake Estates development in Nevada County, California. The report identified and analyzed potential hydrologic impacts of maintaining the ponds adjacent to a vineyard and determined the significance of potential seepage impacts on vine growth. The project was controversial because of the valuable and expanding wine-making industry in Nevada County. The technical approach included comparing pre- and post-construction surface water and groundwater hydrology, examining existing groundwater elevation data from on-site wells, preparing cross-sections of the ponds and neighboring areas to depict water elevations and potential impacts, and observing the site during different weather and hydrologic conditions to identify potential impact areas. Alternatives that were analyzed included various options for the ponds with mitigating measures, as well as the "No Project" Alternative. Greystone's Final EIR demonstrated that local topography and hydrologic flow characteristics precluded impacts to the vineyard, and a simple cut-off trench was included as a mitigation measure to relieve the dispute between the neighboring landowners.

PEDESTRIAN BRIDGE PROJECT

City of Galt Planning Department

Greystone assisted the City of Galt with permitting requirements on the construction of two clear span pedestrian bridges across Deadman Gulch. Greystone will prepared an Initial Study pursuant to CEQA, which identified potential effects and permitting requirements. Greystone also prepared a mitigated negative declaration for adoption by the City. Greystone also attend meetings, representing City staff, the applicants and City decision-makers.

WEBER DAM SEISMIC RETROFIT CONSTRUCTION PROJECT REPORT

El Dorado Irrigation District (EID)

Greystone was retained to prepare an EIR for EID for its proposed reconstruction project for the Weber Dam, a concrete multiple-arch structure constructed in 1924. The existing dam was determined to be at risk of failure in a maximum credible seismic event. Dam safety agencies directed the EID to take action to eliminate the seismic safety hazard. Early in the study process Greystone determined that the retrofit project qualified for a Categorical Exemption under Section 15302(a) of CEQA. The final determination was made based upon site specific analyses of biological and cultural resources to verify that no exceptions to the Categorical Exemption existed for the project.

A Project Report was subsequently prepared for EID to provide citizens, and local and state agencies with information regarding the retrofit project. Issues addressed included examination of construction impacts including traffic, noise, water quality, vegetation and habitat disturbance, and potential land use conflicts. In addition, Greystone provided guidance regarding compliance issues with the federal Endangered Species Act, and NEPA, and developed materials for the Streambed Alteration Agreement with the State Department of Fish and Game.

GALT WATER LINE AND STORAGE TANK ASSESSMENT DISTRICT EXPANDED INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION, AND MITIGATION IMPLEMENTATION PLAN

City of Galt

Greystone prepared an expanded Initial Study and Mitigated Negative Declaration for a 12-inch water line extending 9,800 feet to an existing well. The water line provides connection between the City's existing wells and new wells under construction to serve expanding residential development. The water line route lies within public rights-of-way in City and County lands, including roadways and existing easements. The proposed three million gallon water storage tank is located on a 1.2+ acre site. Primary issues examined included service capacity and phasing of proposed improvements; land use and infrastructure planning, including growth inducement, right-of-way requirements, and right-of-way acquisition; and the location, design and aesthetic considerations for the proposed water tank.

TRUCKEE RIVER OPERATING AGREEMENT EIS/EIR REVIEW

Town of Truckee

Greystone was retained as a special consultant to the Upper Truckee River Basin Association (led by the Town of Truckee) for technical review and policy strategies in review of the Truckee River Operating Agreement EIS/EIR. The review focused on river system modeling, regulatory compliance, findings of significant effects, and requirements for mitigation implementation and monitoring. Critical analysis of river system modeling and impact assessment findings revealed severe flaws in the analysis that caused the federal agency to reassess potential impacts and add protections in favor of the Upper Truckee River Basin agencies.

BUTTE CREEKSIDE EIR

Butte County

Greystone prepared an EIR from Draft through Final conforming to CEQA guidelines. The EIR included analysis of environmental effects associated with the development of 14 single-family residential lots on approximately 93 acres adjacent to Butte Creek, east of the City of Chico, California. The EIR focused on three areas of concern as determined by the Butte County Planning Department: 1) impacts to wetland resources; 2) location within the floodplain of Butte Creek and concerns regarding flood hazards and potential impacts to the proposed on-site sewage disposal facility; and 3) traffic concerns on a regional and local level. Additional sections as required under CEQA were also included in the documentation.

Greystone Resumes

Jeffrey G. Harvey, Ph.D.

EDUCATION

- **Ph.D.** (Geography)
  University of California – Los Angeles
- **Masters of Science** (Geography)
  California State University – Chico
- **Bachelor of Arts** (Geography)
  California State University – Chico

SPECIALTIES

- Environmental Law and Policy, Impact Analysis, Permitting, Natural Resources Management, Land and Water Resources

CERTIFICATIONS/AFFILIATIONS

- *Expert Witness Techniques*; U.S. Fish and Wildlife Service Training Program
- *Field Techniques for Stream Habitat Analysis*; U.S. Fish and Wildlife Service Training Program
- *Teaching Credential, The California Community College*. Subject Area: *Earth Sciences*

PUBLICATIONS

- *Restructuring the Electric Utility Industry: Environmental Realities and Opportunities;* Proceedings of the Edison Electric Institute, Natural Resources Subcommittee, Mobile, Alabama
- *Water Labyrinth: Policy Reforms for Reallocation of California's Water Resources;* Proceedings of the Association of American Geographers, Washington, D.C., 1994
- *Clearing the Regulatory Hurdles for Mining Projects;* Proceedings of the Mining Environmental Management Congress, Sparks, Nevada, October 1994; with Brian J. Plant, Esq.
- *Investigation of Water Supply Agencies & Institutions: Institutional Analysis for the San Joaquin Valley Drainage Program,* Natural heritage Institute, San Francisco, California, 1991

EXPERIENCE 21 Years

- **Greystone**
  Group Manager
- **Research Associates**
  Principal and Project Manager
- **Eco-Analysts**
  Environmental Scientist and Project Manager

Dr. Harvey has 20 years experience as a consultant in environmental planning and reporting pursuant to requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). Reports have been prepared for local, state, and federal government agencies; nonprofit environmental groups; and private land developers. Special emphasis has been placed on development of economically sound mitigation strategies, active coordination with agency staff and government decision-makers, and effective public testimony. Dr. Harvey has organized and managed the preparation of more than 175 environmental impact reports, environmental assessments, expanded initial studies, and special resource analyses for a variety of projects; including water resource management, power generation projects, state-wide electric utility restructuring, mining and reclamation projects, and local land development and public infrastructure projects.

Peter Boucher

EDUCATION

- **Masters of Science** (Environmental Engineering – Water Resources)
  Northeastern University

- **Bachelor of Science** (Biology)
  Northeastern University

SPECIALTIES

- Water and Sediment Quality Assessments, Watershed Management, Ecological Assessments, Environmental Impact Assessments, Remedial Investigations

CERTIFICATIONS/AFFILIATIONS

- Water Environment
- Federation

EXPERIENCE 17 Years

- **Greystone**
  Environmental Scientist
- **Tetra Tech EM, Inc.**
  Environmental Scientist
- **Metcalf & Eddy, Inc.**
  Project Biologist

Mr. Boucher has 17 years of experience in water and sediment quality assessments, watershed management, nonpoint source control, ecological assessment, lake restoration, environmental impact assessment and mitigation, and remedial investigations and feasibility studies of hazardous waste sites. He has completed wetland and other environmental permit applications for projects involving dredging; commercial developments; and wastewater and stormwater collection, treatment, and disposal. He designed and directed a variety of field investigations for remedial investigations and studies of wetland, lake, river, and marine environments. Participated in several water quality studies in California including a sanitary survey update and watershed management plan for the Calaveras River, studies of a mercury - contaminated lake and wetland adjacent to the Sulphur Bank Mercury Mine in northern California, and studies of the effects of U.S. Navy facilities on estuarine environments.

For the EPA, Mr. Boucher evaluated the results of 15 federal Section 314 Clean Lakes Program projects conducted throughout New England involving review of diagnostic data and evaluations of project success. Other lake restoration work was completed for the State of Massachusetts and included work at six different lakes. The work included limnological investigations and analyses, pollutant loading estimates, watershed assessments, evaluation of lake management alternatives, and development of recommendations. He has planned and designed sediment removal and dewatering, outlet structure and storm drain improvements for Hardy Pond in Waltham, Massachusetts.

For the State of Massachusetts, he prepared nonpoint source management plans for two coastal areas, including analysis of environmental data, identification of pollution sources, and development of best management practices. He coordinated a project advisory group and held working sessions and public information meetings. Mr. Boucher also prepared a guidance document for municipal officials on the development of local nonpoint source controls.

K.M. (Mike) Kolin, P.E.

EDUCATION

- **Engineer of Mines**
  Colorado School of Mines – Golden, Colorado
- **Master of Science**
  Henry Krumb School of Mines, Columbia University

SPECIALTIES

- Project Management, Mine Engineering, Feasibility Studies, Financial Evaluations, Reclamation Planning, Permitting, Due Diligence, Capital and Operating Cost Estimates

CERTIFICATIONS/AFFILIATIONS

- Professional Engineer – Colorado
- Society of Mining, Metallurgy, and Exploration (SME)

EXPERIENCE *33 Years*

- **Greystone**
  Engineering Manager/Senior Project Manager
- **Consolidated Nevada Goldfields Corp.**
  VP & COO, Engineering Manager
- **Pincock, Allen & Holt**
  Executive Vice President, Principal Mine Engineer
- **Wyoming Fuel Company**
  Manager of Engineering
- **Woodward-Clyde Consultants**
  Project Manager/Mining Engineer
- **U.S. Bureau of Mines**
  Mining Engineer/Project Leader
- **Duval Corporation**
  Mining Engineer

Mr. Kolin is an accomplished professional engineer and manager with experience in surface and underground mining of precious and base metals, coal, and industrial minerals. He has held key executive and management positions in operating mines in the US and Mexico and has consulted on mining assignments in most of the major mining districts of the world.

Mr. Kolin's mine engineering skills include mine planning, reserve estimation, equipment selection, civil design, capital and operating cost estimation, project evaluation, and feasibility studies. In addition, he has significant environmental experience, including permit applications (modification, monitoring, etc.), surface water hydrology (channel, culvert, embankment, and sedimentation pond design), reclamation planning and implementation, cost estimates and bonding calculations, and agency liaison and negotiation.

As a project manager, Mr. Kolin has completed hundreds of projects in research, mine operations, and consulting. These projects have ranged from construction of multi-million dollar mines and facilities to feasibility studies, environmental studies, project audits, and due diligence reviews for major international mining project financings, mergers, and acquisitions. His wide variety of project experience allows him to work effectively with engineers, corporate executives, and legal, financial and regulatory professionals.

Ryan W. Henning

EDUCATION

- **Masters of Science** (Conservation Biology) - ongoing
  California State University – Sacramento

- **Bachelor of Science** (Biological Science)
  University of North Dakota – Grand Forks

SPECIALTIES

- Terrestrial Ecology, Botanical/Wildlife/Aquatic Field Studies and Surveys, Reclamation Planning and Implementation, Ecological Impact Assessment, Threatened and Endangered Species Investigations, Resource Management

CERTIFICATIONS/AFFILIATIONS

- The Wildlife Society
- USACOE Wetlands Delineation Survey Techniques
- Northern Goshawk Survey Techniques
- Black-footed Ferret Survey Techniques
- Southwestern Willow Flycatcher Survey Techniques
- Preble's Meadow Jumping Mouse Survey Techniques
- FERC Environmental Inspection Training
- OSHA 40-hour Certification

EXPERIENCE *10 Years*

- **Greystone**
  Environmental Scientist/Ecologist
- **Indian Head Mine (Bellaire Corp.)**
  Environmental Assistant II and III
- **North American Coal Corporation**
  Environmental Assistant I

Mr. Henning is a multi-disciplinary professional who has worked in the fields of plant and wildlife ecology. He has technical experience on a variety of projects in the western United States including baseline vegetation and wildlife data collection; wetlands delineation; fish, plant, and wildlife surveys; threatened and endangered species investigations; ecological impact analysis; environmental permitting; reclamation planning; and bond release applications.

Mr. Henning has participated in preparing NEPA, SMCRA, CEQA, SMARA, and other environmental compliance documents and environmental permitting requirements. These documents were prepared for a variety of federal agencies including the Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service, Federal Energy Regulatory Commission, Office of Surface Mining, U.S. Army Corps of Engineers, and various state and local agencies. Mr. Henning has performed field investigations and impact assessment on a variety of projects including coal, hard rock, and aggregate mines; natural gas pipelines; natural gas power plants; ski resorts; hydroelectric re-licensing; and transmission line projects.

Michael Lee Jones

EDUCATION

- **Master of Science** (Health Physics/Radiation Ecology)
  Colorado State University – Ft. Collins, Colorado
- **Master of Arts** (Zoology/Ecology)
  University of California at Davis – Davis, California
- **Bachelor of Science** (Biology)
  Auburn University – Auburn, Alabama

SPECIALTIES

- Terrestrial Ecology, Mammalian Biology, Ecological Risk Assessment, Ecotoxicology, Radiation Ecology

CERTIFICATIONS/AFFILIATIONS

- Certified Senior Ecologist, Ecological Society of America
- Technical Reviewer, Environmental Toxicology and Chemistry Journal
- National Biological Service Habitat Evaluation Procedures (HEP)
- OSHA Health & Safety 40-hr Training, 8-hr Refresher Training, 8-hr Supervisor Training
- ASTM Subcommittee E47.13: Assessment of Risk to Human Health and the Environment from Contaminated Sites
- Society of Environmental Toxicology and Chemistry
- Ecological Society of America
- Health Physics Society

EXPERIENCE *17 Years*

- **Greystone Environmental**
  Senior Terrestrial Ecologist, Senior Ecological Risk Assessor
- **ARCADIS Geraghty & Miller**
  Regional Coordinator for Risk & Associated Services, Senior Ecological Risk Assessor
- **CH2M Hill/Port Arthur Remediation Team**
  Risk Assessment Technical Lead, Senior Ecologist Risk Assessor
- **Foster Wheeler Environmental Corporation**
  Senior Ecological Risk Assessor, Senior Ecologist, Health Physicist

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Mr. Jones has a broad range of experience as a terrestrial ecologist and ecological risk assessor. He has performed wildlife field studies, habitat characterizations, and ecological risk assessments for a diverse group of government and private sector clients. His experience includes involvement in all phases of large, complex ecological risk assessments and wildlife projects, including writing work plans and field sampling plans; conducting site visits; analyzing data, and writing reports. He has held a variety of biological fieldwork positions in the U.S. and Latin America concerning visits to map the study, collection, or survey of different wildlife, fish, and plant species and ecosystems. He has prepared and reviewed NEPA documents for several large projects. Mr. Jones is also adept in the use of GPS equipment, radiotelemetry equipment, animal traps, mist nets, firearms, and aquatic sampling equipment.

Henry H. Sauer

EDUCATION

- **Bachelor of Science** (Range Management)
  Colorado State University – City, State

SPECIALTIES

- Reclamation/closure planning, permitting and design
- Natural resource development analysis, planning and permitting
- Soil, vegetation, water, erosion and waste assessment/management/mitigation
- Geochemical investigation and analysis
- Impact assessment

CERTIFICATIONS/AFFILIATIONS

- Member, American Society of Agronomy
- Member, Soil Science Society of America

EXPERIENCE *15 Years*

- **Greystone**
  Senior Environmental/Soil Scientist
- **Golder Associates, Inc.**
  Senior Project Scientist/Project Manager
- **Utah Division of Oil, Gas, and Mining**
  Senior Reclamation Soils Specialist
- **U.S.D.A/Soil Conservation Service Sterling, Colorado**
  Soil Conservationist
- **Colowyo Coal Company**
  Reclamation Technician
- **Colorado Yampa Coal Company**
  Range Technician

Mr. Henry Sauer's over 15 years of experience includes a broad range of reclamation planning, permitting and implementation; soil and plant investigation/survey; geochemical assessment; soil and water analysis and interpretation; erosion control analysis and planning; and, site assessment and inspection. His technical focused is on soil and mine waste management; contaminant fate; plant phytoxicity/tolerance; organic matter decay; nutrient mineralization/partitioning; and, revegetation. Mr. Sauer has managed multiple projects and tasks, performed alternatives analyses, and prepared construction level reclamation and closure plans. He has also completed environmental site/impact assessments to identify potential and existing environmental impacts and evaluate compliance with regulatory requirements. Mr. Sauer has worked for the coal and hardrock mining as well as the oil and gas industries. Mr. Sauer has been involved with more than 125 environmental projects and associated tasks.

Steven T. Faulk

EDUCATION

- **Masters of Science** (Biology)
  University of Denver – Denver, Colorado

- **Bachelor of Science** (Biology)
  Denison University – Granville, Ohio

SPECIALTIES

- Impact Assessment, Wildlife Ecology, Avian Ecology, Threatened and Endangered Species Evaluation, Ecological Risk Assessment, and Wetland Delineation

CERTIFICATIONS/AFFILIATIONS

- U.S. Army Corps of Engineers Wetlands Delineation Certification
- Ecological Society of America
- Society of Conservation Biology
- Society of Environmental Toxicology and Chemistry
- Scuba Certification
- 40-hour OSHA Training (OSHA 1910.120)(e)(8)

EXPERIENCE *8 Years*

- **Greystone**
  Biologist/Ecological Risk Assessor
- **Geomega**
  Biologist/Ecological Risk Assessor
- **Foster Wheeler Environmental**
  Biologist/Ecological Risk Assessor

Mr. Faulk has a broad range of skills and experience as a biologist and an ecological risk assessor. Most recently he has been involved with technical aspects of biological assessments, biological evaluations, environmental assessments, and environmental impact statements.

Mr. Faulk has extensive experience in terrestrial and wildlife ecology, with particular attention to small mammals and avian species. He is experienced with the permitting, field surveying, data analysis, and report writing associated with a variety of plant and animal species, including threatened, endangered, and sensitive status species. He has also participated in aquatic resource sampling, terrestrial habitat evaluation and mapping, small mammal trapping and avian mist netting, bat mist netting, wetland delineation, and land surveying using transit and global positioning systems (GPS).

Mr. Faulk is also an experienced ecological risk assessor. He has been responsible for all aspects of risk assessment projects including planning, budgeting, managing, devising technical field and sampling protocols, risk assessment methodology, data compilation, toxicological and ecological benchmark research, results interpretation, and oral and written presentations.

John MacDonald

EDUCATION

- **Masters Student of Environmental Design** (Environmental Science)
  University of Calgary

- **Bachelor of Science** (Zoology)
  University of Calgary

SPECIALTIES

- Public Participatory Wildlife Management; Alberta Government Policies and Industrial Operating Guidelines Affecting Woodland Caribou in Northern Alberta; Reptile, Bird, and Ungulate Surveys.

CERTIFICATIONS/AFFILIATIONS

- WHMIS, CPR/First Aid Training, TDG, and H_2S
- Cactus Ferruginous Pygmy Owl (*Glaucidium brasilianum*) Survey Training

EXPERIENCE 7 Years

- **Greystone**
  Consultant

- **Alberta Environment, Natural Resources Service Chain Lakes Provincial Park, Moose Lake Provincial Park**
  Seasonal Park Ranger

Mr. MacDonald's masters thesis involved working with the Boreal Caribou Committee to evaluate the participatory nature of this resource management committee. He also evaluated proposed industrial operating guidelines for caribou ranges in northern Alberta regarding their ability to protect caribou and their habitat.

Mr. MacDonald has previous work experience with Alberta Environment as a Park Ranger. He is familiar with and has enforced legislation such as the Alberta Environmental Protection and Enhancement Act, Alberta Wildlife Act, the Water Act, and the Forestry Act. He was also in charge of the design and publication of the web sites for two provincial parks.

Mr. MacDonald has conducted environmental assessments pursuant to the Canadian Environmental Assessment Act on First Nation land throughout the province of Alberta. He has been involved in the environmental assessment and permitting for numerous oil and gas and power projects across the United States and Canada. More recently, Mr. MacDonald has conducted threatened and endangered species surveys across several western states and the United States Air Force Academy.

Carl D. Späth, Ph.D.

EDUCATION

- **Doctor of Philosophy** (Anthropology/Agronomy)
  University of Illinois – Urbana, Illinois

- **Masters of Arts** (Anthropology/Archaeology)
  University of Illinois – Urbana, Illinois

- **Bachelor of Arts** (Anthropology)
  University of Michigan – Ann Arbor, Michigan

SPECIALTIES

- Cultural Resource Inventory and Assessment, Historical Archaeology, Prehistoric Archaeology, National Register Evaluation, Ethnohistory, Crop Evolution

CERTIFICATIONS/AFFILIATIONS

- Society for American Archaeology
- Colorado Council of Professional Archaeologists
- Society for Historical Archaeology

EXPERIENCE *24 Years*

- **Greystone**
  Senior Archaeologist
- **Metcalf Archaeological Consultants, Inc.**
  Senior Archaeologist
- **Cultural Research Management**
  Chief Archaeologist
- **Fulbright Commission**
  Fulbright Scholar
- **Wyoming State Historic Preservation Office**
  National Register Archaeologist
- **Central Michigan University**
  Assistant Professor
- **Office of the Wyoming State Archaeologist**
  Projects Director
- **University of Wyoming**
  Assistant Professor
- **Illinois Archaeological Survey**
  Resource Investigation Archaeologist

Dr. Späth has experience in academic and contract archaeology and cultural resource management in the midwestern and western United States, and in Mexico and Andean South America. He has developed and implemented inventory and sampling designs for numerous small and large linear and block projects He has also developed individual and multiple property contexts for the evaluation and nomination of prehistoric and traditional cultural properties, and was instrumental in the development of cultural landscape models for the management of extensive cultural properties

Peter B. Evans, EIT

EDUCATION

- **Bachelor of Science** (Architectural Engineering)
  University of Colorado – Boulder, Colorado
  Emphasis in Mathematics & Construction Management

SPECIALTIES

- Computer Aided Land Development
- Geospatial Data Analyses
- Mining Engineering & Economics
- Environmental Permitting & Reclamation Bonding

EXPERIENCE *8 Years*

- **Greystone**
  Land Development
  Geospatial Data Analyses
  Design Engineer
- **Independent Testing Laboratories**
  Design Engineer
  Lab Supervisor
- **Proven Alternatives**
  Energy Management Engineer
  Project Manager for San Francisco, Northern Los Angeles

Mr. Evans has provided drafting, graphics, GIS and engineering technical support for various disciplines, specializing in mine planning and reclamation.

His engineering experience includes a variety of mine planning and reclamation design: dirt balance calculations, grading and backfilling, road design, slope stability analysis, fill design, surface water management planning, storm water ditches, culverts, and sedimentation ponds, reclamation bond economics, post mining topography development, blasting, corrugated metal bridges and tunnels, buildings and facilities, railways, and waste remediation. Additionally, he has extensive knowledge and experience in land development, site surveying, mapping, and geospacial data analysis.

He has experience using various programs that include AutoCAD Map &, Land Development, Arcview, GEO SLOPE, Photoshop, Lightscape, MathCAD, Mathmatica, Photopia, SAPP, SEDCAD, AutoLUX, Microsoft Office Applications and other engineering based programs. Programming languages include Fortran, C++, MatLAB, and HTML.

He is certified in Multiple Accounts Analysis (MAA) and Spill Prevention Control and Countermeasures (SPCC).

He has worked with many state and federal agencies in the preparation of applications, permits, due diligence audits, reclamation bond acquisitions/releases, facility removal plans, water management plans, and environmental impact assessment.

He is currently pursuing his PE in Environmental Engineering.

Lisa Morinini

EDUCATION

- **Bachelor of Science, Marketing,** California State University, Sacramento, 1988

SPECIALTIES

- Quality Control / Quality Assurance
- Editing & Production
- Public Involvement Support
- Business Development

EXPERIENCE 14 Years

- **Greystone**
  Quality Control Coordinator / Senior Editor
- **Navigant Consulting**
  Marketing Manager
- **Brown & Caldwell**
  Business Development Coordinator

Ms. Morinini is responsible for the quality of all work products prepared by Greystone, and assists project managers with all project deliverables. She acts as senior editor and production supervisor for all major documents and reports. She reviews work products and develops recommendations about quality to the technical staff and management. She provides editorial review for major report efforts involving multiple parties and those requiring incorporation of reviewer's comments and final revisions to the reports. As Quality Control Coordinator, she ensures that documents are reviewed for technical and editorial consistency. In addition, products are reviewed for internal and customer-required formats.

Lisa also assists in the planning, logistics, and conduct of major meetings, including client and/or team meetings, agency meetings, and public involvement meetings and workshops. Tasks range from development of agendas, handouts, presentations and supporting graphics, and sign-in sheets, to arranging and setting up properly equipped meeting facilities, and to keeping meeting minutes and preparing summary meeting notes.

In her role as business development coordinator, Lisa manages overall strategy, planning and execution of the California marketing program including developing marketing procedures, monitoring annual business plans, analyzing industry trends, overseeing development of marketing materials and advertisements, managing development and maintenance of business planning and marketing databases, and coordinating participation in tradeshows and conferences. She manages staff in day-to-day marketing activities related to proposals and presentations; project experience statements and qualifications summaries; client meetings; and public involvement meeting and workshops.